

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for facilitating parsing XML data, the method comprising:

creating a user-defined parsing function, the parsing function being a member of a user class library, the parsing function containing a custom parsing code written by a user to customize the parsing of the content of XML elements;

mapping an XML element to the user-defined parsing function, the mapping the XML element to the parsing function including creating a parsing map describing the XML element by XML element name and identifying the class member associated with the XML element;

creating a parser to pre-parse XML source data, the parser including a parsing agent, the parsing agent automatically generating a parsing state machine in accordance with the XML element names defined in the parsing map;

exposing the mapping to ~~an agent~~ the parser via a communication channel;

receiving an event for the XML element from an event-based reader of XML data containing the element;

pre-parsing the content of the XML element from the XML source data using ~~[[a]]~~ the parsing state machine automatically generated by the agent in accordance with the exposed mapping; and

sending the pre-parsed content of the XML element via the communication channel to the user-defined parsing function.

2. (Canceled)

3. (Original) The method of Claim 2, wherein sending the pre-parsed content of the mapped XML element via the communication channel to the parsing function includes looking

up the class member identified as being associated with the XML element, and sending the pre-parsed content of the XML element to the associated class member.

4. (Original) The method of Claim 2, wherein the parsing function is a reusable object to which the XML element has been previously mapped, and mapping the XML element to the parsing function includes:

creating the parsing map describing the XML element and identifying the reusable object associated with the XML element; and

joining the reusable object to the other parsing functions described in the parsing map.

5. (Original) The method of Claim 1, wherein the agent is an implementation class member and the communication channel is an interface to the implementation class member that enables the mapping to be exposed to the agent automatically.

6. (Original) The method of Claim 1, wherein the event-based reader of XML data is a SAX reader, and receiving the event for the mapped XML element includes selecting from a plurality of events that have been pushed by the SAX reader only those events that are associated with the mapped XML element.

7. (Original) The method of Claim 1, wherein pre-parsing the content of the XML element includes at least one of verifying a structure of the XML element relative to other XML elements occurring in the XML data, verifying a consistency of the XML element, extracting an attribute of the XML element, and collecting a content of the XML element.

8. (Original) The method of Claim 1, further comprising:
mapping an XML element that was previously mapped to an existing parsing function;
joining the existing parsing function to the created parsing function;

sending the pre-parsed content of the mapped XML element via the communication channel to the joined parsing functions.

9. (Currently amended) A computer system for parsing XML data, the computer system comprising a processor and a memory having computer-executable instructions that, when executed by the processor, generate:

a library of custom user-defined parsing functions to parse content of XML elements;

a parser having a map that associates custom user-defined parsing functions with XML elements by associating a class member name to an XML element name; and

~~a communication channel;~~

[[an]] a parsing agent, the parsing agent automatically generating a parsing state machine in accordance with the XML element names defined in the parsing map, the parsing agent operating in conjunction with a communication channel, that obtains the parsing agent obtaining the content of an XML element on behalf of the parser in accordance with the map by pre-parsing the content of the XML element from the XML source data using the parsing state machine, wherein the map is accessed via the communication channel, and further where the parsing agent passes the content to the associated custom user-defined parsing function via the communication channel.

10. (Currently amended) The computer system of Claim 9, wherein the library of custom parsing functions is a class library of members that receive content from the parsing agent via the communication channel.

11. (Canceled)

12. (Currently amended) The computer system of Claim 9, wherein at least one of the parsing functions is a reusable object to which an XML element has been previously associated, and the parser joins the reusable object to the other parsing functions in the map.

13. (Currently amended) The computer system of Claim 9, wherein the parsing agent is an implementation class member and the communication channel is an interface to the implementation class member that enables the agent to access the map automatically.

14. (Currently amended) The computer system of Claim 9, further comprising an event-based reader, wherein the parsing agent obtains the content of the XML element on behalf of the parser, including handling events generated for the XML element by the event-based reader.

15. (Currently amended) The computer system of Claim 14, wherein the event-based reader of XML data is a SAX reader, and handling events generated for the XML element includes at least one of verifying a structure of the XML element relative to other XML elements occurring in the XML data, verifying a consistency of the XML element, extracting an attribute of the XML element, and collecting the content of the XML element.

16-30. (Canceled)